Peanut Farmers Have a Suite Deal

Farming is like a grand symphony. Just as movements in a symphony must work together to achieve harmony, the many operations in a farm need to fit intricately together to achieve balance. So it is fitting that a suite—a package of computer programs named "FarmSuite"—offers farmers a way to manage all their farming operations. But it started with just one "movement."

In the 1980s, peanut farmers noticed something puzzling: Their dryland fields were yielding more than their irrigated fields. Initially, they thought they were irrigating improperly or recording the irrigation amounts incorrectly. To find out, they asked scientists at the Agricultural Research Service's (ARS) National Peanut Research Laboratory (NPRL) in Dawson, Georgia, for help.

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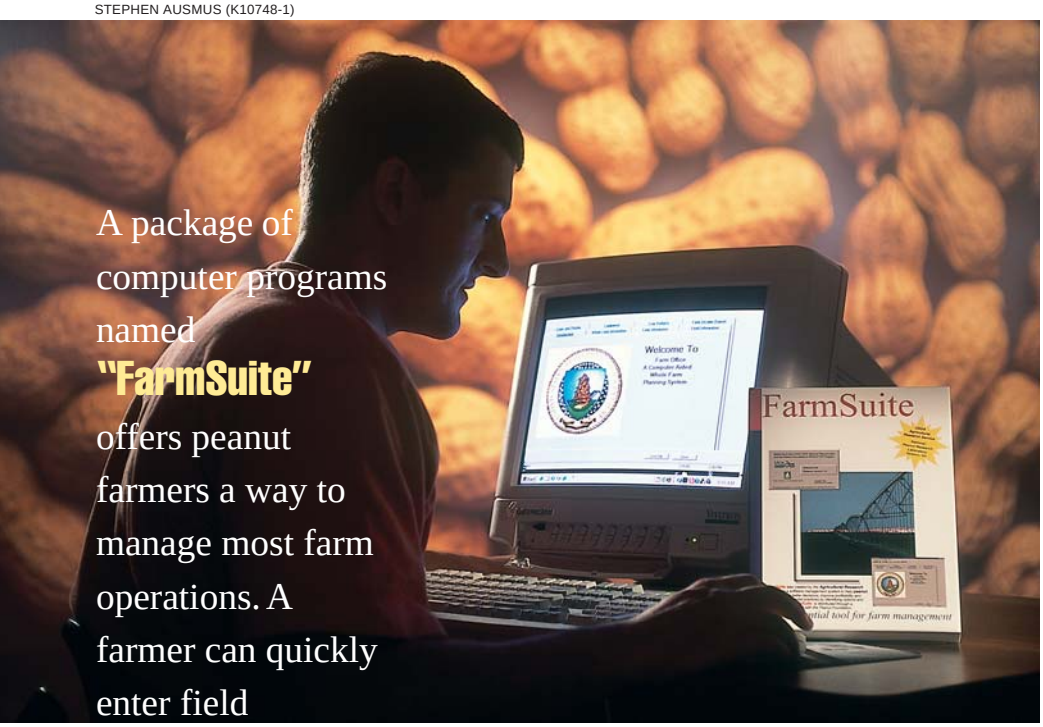

A package of computer programs named **"FarmSuite"** offers peanut farmers a way to manage most farm operations. A farmer can quickly enter field information to manage crop production more effectively and to calculate profit or loss for individual fields.

"In fact, the farmers were not mistaken," says Marshall Lamb, NPRL's food technologist. "The peanut plants responded better to dryland conditions because of improper irrigation management." From this collaboration, Irrigator Pro was developed.

Irrigator Pro is a computerized expert system designed to manage peanut irrigation and pest control decisions. Irrigator Pro's goal is to improve economic returns from irrigation and reduce incidences of foreign material, immaturity, off-flavor, chemical residues, environmental harm, and aflatoxin. Over 20 years of scientific research data and information are incorporated in the software to help peanut farmers make informed, appropriate irrigation decisions.

Little did anyone know that this was just the beginning of software systems that would help peanut farmers do their jobs. HarvPro, Peanut Curing Manager, Capital Investment Program, Sprinkler Cost Program, and later, WholeFarm followed. "The program really blossomed from listening to farmers and shellers describe problems and finding ways to solve them," says Lamb.

Retired mechanical engineer James Davidson collaborated with peanut farmers and the Peanut Foundation to create Irrigator Pro in the late 1980s. Lamb currently oversees the software programs, including the latest software component of the suite, WholeFarm, which is fast becoming an integral part of peanut farm operations. "The software has had a significant impact through improved management by giving the grower another method to make decisions," says Lamb.

All types of information are incorporated into the WholeFarm software to provide a reliable, accurate picture of what is happening on a farm and help the grower make financial decisions about the farm operation. Farmer can "build" their farms into the computer and analyze different situations that can affect the entire operation. For example, a farmer can evaluate which crops to plant for maximum profit and how changes in

crop prices would influence income, cash flow, and break-even yields. Even equipment purchases can be figured in.

A farmer with a computer can quickly enter field information to manage crop production more effectively than ever. Water-, temperature-, and cost-monitoring graphs let a grower evaluate economic and agronomic conditions. WholeFarm includes predictive software to help farmers plan more effectively, and it recommends a course of action.

The Farm Bill of 2002 allows growers to produce crops in response to market conditions instead of by artificial acreage quotas determined by the government. This helps protect growers' incomes and allows them to pursue what they want to grow and what they feel will be profitable for them. This makes a tool like WholeFarm not only important, but for some in the industry, highly desirable.

In Georgia, some lending institutions strongly encourage farmers to provide the cost analysis and profit/yield predictions run by the software. Southwest Georgia Farm Credit's loan officer Bonnie Smith says, "It is a great package to have in the loan application, since it allows for sensitivity analysis on crop prices and provides a good overview of farmer operations. If the WholeFarm analysis is not in the package, we ask the farmer to include it. It gives sensible projections for the farm operation based on previous data, and with the new Farm Bill, WholeFarm can factor in direct payments from the government and other projections."

Farmers find the software helpful, even if it takes some getting used to. Al Breedlove, a Georgia producer of peanuts, corn, and cotton, is happy to have the software handy. "It takes time and discipline, but in the long run it really helps," says Breedlove. He was a little intimidated at first. "But the NPRL staff was so helpful in getting me started with the software, which allows me to keep up with recording all the daily activity and inputs."

Each field is handled individually and is different from others, according to Breedlove. "Through the program, you can calculate profit or loss for individual fields and get yield projections," says Breedlove. "It's like balancing a checkbook. The more often I balance the checkbook, the more precise the information will be and the more confident I am in the bottom line. By keeping up with inputs and other activity, I know what's happening in each field, and it takes out a lot of the guesswork."

Changes in market variables, prices the crop will bear, or even the cost of field inputs can be altered in the program. "We can change the software immediately to reflect the information needs a grower has at any time," according to Lamb.

The software is distributed by the Peanut Foundation under a Cooperative Research and Development Agreement with ARS. "The program provides integrated software that isn't available elsewhere: an economic model and a farm equipment technology model," says Peanut Foundation executive director Howard Valentine. "While farming is a great lifestyle, it's a poor business. Our country needs farmers to stay in business, and we need to transfer agronomic knowledge to the farmers to assist them."

Lamb and the Peanut Foundation are considering making the program web based. Also, peanuts aren't the only commodity the software covers. "The program can be tailored to larger audiences, like cotton and corn farmers," says Lamb.

Currently, FarmSuite software, including all of the software programs together, is available from the Peanut Foundation for only $25, and farmers are permitted to share the programs. Why only $25? "We are a not-for-profit organization," Valentine explains. "We don't want the price to impede growers' use of the software. Our profit is in keeping growers profitable."—By **Sharon Durham,** ARS.

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Peanut plants dug up from the field and hanging upside down.